



Plan for Determining Maintenance Investment Requirements for High RPV Low Maintenance Assets

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Issue and Background



Office of Science

- ❑ Issue: How to determine the appropriate maintenance investment level for High RPV-Low Maintenance (HR-LM) Assets
- ❑ Background:
 - HR-LM assets are facilities such as accelerator tunnels, beam interaction halls and vaults that are:
 1. Costly to construct due to heavy concrete construction and excavation costs
 2. Have few “maintainable” general purpose systems and components such as lighting, ventilation, fire and emergency, interlocks, access, drainage pumps, etc.
 3. Often not occupied when in operation
 - HR-LM assets are generally “buildings” in FIMS except for a few OSF Category 3000 assets (see Slide 4 for exceptions)
 - Current method for estimating maint investment (a min of 2% of RPV) can significantly overestimate requirements
 - No maintenance history nor relevant sustainment models are readily available to met the need for estimating required maint



Planned Approach



- ❑ For HR-LM facilities, use the Conventional Facility Indicator (CFI) in FIMS to compute a new “Adjusted RPV” for use calculating Maintenance Investment Index
- ❑ The CFI percentage is equal to the percent of the original RPV that is attributable to maintainable systems and components
- ❑ Will require Sites to identify what components or portions of components would be considered maintainable
- ❑ The Adjusted RPV of the maintainable systems and components will be estimated based on cost model such as CostWorks, VFA, or independent engineering study
- ❑ The current minimum of 2% of RPV will then be applied to the Adjusted RPV for determining Maintenance Investment level



Application to OSF Category 3000 Assets



- ❑ OSF Category 3000 assets are “Programmatic” and are excluded from MII Calculation
- ❑ But, a few that have conventional aspects would also be subject to this approach. These few are listed below:

SITE NAME	OSF RPV 3000 Series	PROPERTY ID	PROPERTY NAME
BNL	\$668,351	2060	Equipment Enclosure AGS 1 in Bldg. 913
BNL	\$343,561	2070	Equipment Enclosure AGS 2 in Bldg. 913
BNL	\$703,548	2080	Equipment Enclosure AGS 3 in Bldg. 913
BNL	\$573,040	2090	Equipment Enclosure AGS 4 in Bldg. 913
BNL	\$236,945	2100	Equipment Enclosure AGS 5 in Bldg. 913
BNL	\$43,335	2250	Equipment Enclosure AGS 6 in Bldg. 913
FERMI	\$745,748,925	701030125	Research Acc Ring/Tunnel
TJNAF	\$11,665,737	94	Hall B (incl. truck ramp & beam dump)
TJNAF	\$21,218,824	96	Hall C (incl. truck ramp & beam dump)
TJNAF	\$24,758,990	101	Hall A (incl. truck ramp and beam dump)
TJNAF	\$37,624,355	999	Beam Tunnel Facility

- ❑ For these assets, Actual Maint shown in FIMS should only be for the the maintainable “*conventional*” portion of these facilities
- ❑ The TJ assets should be moved to buildings as they are 100% conventional



Other Points



- ❑ Sites that have maintenance funding history data for their systems and components of their HR-LM facilities may use this information to argue for exceptions to the minimum maintenance investment of 2%
- ❑ Sites may alternatively commission an independent contractor to develop a sustainability model for their HR-LM asset. A sustainability model provides estimates of maintenance costs for a facility based on the actual systems and components. Such models may cost \$10,000 per facility.
- ❑ DOD has sustainability models for various heavy concrete facilities that may be helpful to SC sites that want to develop models and to SC to validate site estimate of needed maintenance investment.
- ❑ SC- 31.2 will work with OECM to obtain this DOD sustainment model information.



Schedule



- ❑ July 1 - SC issues guidance
- ❑ August 1 - Sites submit list of candidate HR-LM facilities, an initial list of the maintainable systems/components in facility and their planned approach to estimating RPV
- ❑ September 1 - SC reviews and accepts candidates and plans
- ❑ October 15th - Sites prepare and submit RPV estimates with supporting documentation
- ❑ November 15th - SC validate submissions on a random sample basis
- ❑ December 15th - White Paper prepared for discussions with OECM based on the submissions
- ❑ January 15th - Once OECM's concurs, SC will issue guidance for modifying FIMS
- ❑ February 15th – FIMS modifications completed



Questions and Comments

